Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~A method of sensitizing a sensing surface arranged to be passed by a liquid flow within a flow cell, comprising:~~A method of analyzing a fluid sample for at least one analyte, comprising the steps of:

providing a flow cell having a sensing surface;

providing a laminar flow of a first sensitizing fluid and a laminar flow of a second fluid adjacent to the flow of the first sensitizing fluid such that the two laminar fluids flow together over the sensing surface with an interface to each other, at least the ~~said~~ first sensitizing fluid being capable of sensitizing the sensing surface; ~~, and~~

adjusting the relative flow rates of the first sensitizing fluid and the second fluid to position the interface such that the first sensitizing fluid contacts a discrete sensing area of the sensing surface for selective sensitization thereof to generate a sensitized sensing area;

contacting at least the sensitized sensing area with the fluid sample; and

detecting interaction between the at least one analyte of the fluid sample and the sensitized sensing area.

2. (Original) The method according to claim 1 wherein the second fluid does not interact with the sensing surface to thereby produce a sensitized area and a non-sensitized area on the sensing surface.

3. (Original) The method according to claim 1 wherein, in a further step, the first sensitizing fluid is replaced by a fluid that does not interact with the sensing surface, and the second fluid is replaced by a second sensitizing fluid that is capable of sensitizing the sensing surface differently than the first sensitizing fluid to produce two differently sensitized areas, optionally spaced apart by a non-sensitized area on the sensing surface.

4. (Original) The method according to claim 1 wherein the relative flow rates of the laminar flows are varied to displace the interface laterally and provide a gradient-sensitized area on the sensing surface.

5. (Original) The method according to claim 1 wherein the relative flow rates of the laminar flows are continuously varied to provide a continuous gradient-sensitized area on the sensing surface.

6. (Original) The method according to claim 1 wherein an additional laminar flow of a third fluid is provided on the other side of the flow of the first sensitizing fluid so that the laminar flow of the first sensitizing fluid is sandwiched between the laminar flows of the second and third fluids.

7. (Original) The method according to claim 6 wherein the second and third fluids are not capable of sensitizing the sensing surface.

8. (Original) The method according to claim 7 wherein the method is repeated with at least one different sensitizing first fluid and with varied relative flow rates of the second and third fluids to provide at least two adjacent sensitized surface areas on the sensing surface.

9. (Previously Presented) The method according to claim 1 wherein sensitization of the sensing surface comprises immobilizing an analyte-specific ligand to the sensing surface.

10. (Original) The method according to claim 9 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccaride, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

11. (Original) The method according to claim 1 or 6 wherein the first sensitizing fluid sensitizes an area on the sensing surface, and a second sensitizing fluid is applied transversely to the direction of the first sensitizing fluid to yield an overlapping sensitized area on the sensing surface.

12. (Original) The method according to claim 11 wherein the first sensitizing fluid sensitizes an area on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield at least two overlapping sensitized areas on the sensing surface.

13. (Original) The method according to claim 11 wherein at least two different first sensitizing fluid sensitized at least two parallel areas on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield a matrix of overlapping sensitized areas on the sensing surface.

14. (Previously Presented) The method according to claim 11 wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is an analyte-specific ligand.

15. (Original) The method according to claim 14 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccaride, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

16. (Previously Presented) The method according to claim 11 wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is a bi-functional ligand.

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) The method according to claim 1~~–18~~ wherein at least one non-sensitized area on the sensing surface is used as a reference.

20. (Currently Amended) The method according to claim 1~~–18~~ wherein at least one sensitized area on the sensing surface is used as a reference.

21.-44. (Cancelled)

45. (New) The method according to claim 1, wherein the fluid sample is selectively contacted with the discrete sensitized sensing area by passing the fluid sample through the flow cell under laminar flow conditions with a fourth fluid, wherein selective contact of the fluid sample with a sensitizing sensing area is controlled by adjusting the relative flow rates of the fluid sample and the fourth fluid.

46. (New) The method according to claim 3, wherein the fluid sample is selectively contacted with the discrete sensitized sensing area by passing the fluid sample through the flow cell under laminar flow conditions with a fourth fluid, wherein selective contact of the fluid sample with a sensitizing sensing area is controlled by adjusting the relative flow rates of the fluid sample and the fourth fluid.

47. (New) The method according to claim 45, wherein the fluid sample passes through the flow cell under laminar flow conditions with the fourth fluid, and further with a fifth fluid located on the other side of the flow of the sample fluid so that the laminar flow of the sample fluid is sandwiched between the fourth and fifth flows.

48. (New) The method according to claim 45, wherein the relative flow rates of the sample fluid and the fourth flow are adjusted to bring the sample fluid into contact with a discrete sensing area that was not previously in contact with the sample fluid.

49. (New) The method according to claim 47, wherein the relative flow rates of the fourth and fifth flows are adjusted to bring the sample flow into contact with a discrete sensing area that was not previously in contact with the sample fluid.